

ER 8-6064

1 SEP 1956

card
The Honorable Arthur S. Flemming
The Director, Office of Defense Mobilization
Executive Office Building
Washington, D. C.

Dear Dr. Fleming:

Thank you very much for sending along with your letter of 22 August 1956 the memorandum of comments by Mr. Cooley on our letter of 4 August. We were pleased to have Mr. Fick with us for the second Government-wide conference on Soviet titanium developments, and we shall plan to invite a representative of your office to any future conferences of this type.

The surprise expressed in the first paragraph that the Soviets have only recently turned to copper crucibles from graphite in spite of the widely publicized transition here several years ago is appreciated. However, it has been our experience that the Soviets thoroughly test from laboratory scale to pilot plant to commercial production most innovations reported in the Western technical press. Two to three years is not an excessively long time for undertaking such research and development, based on American experience.

The point on learning more about the experimental applications of titanium in the USSR is a significant one. We should point out that the Soviet work on titanium is protected under the "state secrets" law promulgated by the Council of Ministers (see our letter of 25 May 1956). We believe that the Soviet military establishment is the focal point for applied research on titanium. The security measures for military research are even more stringent than for ordinary academic research. Thus, there are two layers of secrecy covering applied research on titanium, the "state secrets act" and military security. As we have said before, information on titanium development is among the highest priority requirements for collection.

The observation that German research on titanium was being carried on at Bitterfeld before the invasion does not agree with our information. Dr. Walter Dawidl of Berlin Technische Hochschule and Professor Ludwig Neesch of the University of Heidelberg prepared about 400 grams of titanium

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metal powder of high purity by 1943. Dawihl discontinued his interest in metallic titanium in 1943 to turn his attention to compounds of titanium useful as abrasives, e.g. titanium carbide. The Dawihl-Wesch method of reduction of titania is a high pressure-high temperature method, utilizing hydrogen under 900 atmospheres of pressure and at 1200° C. The presently used Kroll process and subsequent modifications produces a cheaper product than the above-described method.

Dr. Max A. K. Hansen of the Metallgesellschaft AG, Frankfurt/Main, is well-known to us. Upon Dr. Hansen's return to Germany in January 1955, he was made one of the five division directors of Metallgesellschaft AG. His particular field of responsibility is that of semi-fabricated and cast articles, primarily of aluminum, copper, aluminum-iron, and titanium. In addition, Dr. Hansen has been acting as consultant on titanium to a group of German concerns headed by Titangesellschaft mbH, Leverkusen. Siemens, Heraeus GmbH, and DEGUSSA have been working with Metallgesellschaft AG on titanium development under Hansen's direction also.

Your interest in titanium developments in the Sino-Soviet Bloc will continue to be treated as a priority subject here. You may be assured that we shall promptly communicate any new information to you.

Sincerely,

SIGNED

C. P. Cabell
Lieutenant General, USAF
Acting Director

ODDI:

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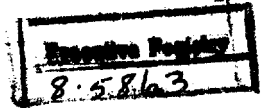
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**EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF DEFENSE MOBILIZATION
WASHINGTON 25, D. C.**



OFFICE OF THE DIRECTOR

AUG 22 1956

Honorable Allen W. Dulles
Director
Central Intelligence Agency
Washington 25, D. C.

Dear Allen:

I thought you or some of your people might be interested in the enclosed memorandum which was prepared for me following receipt of your letter relative to the titanium situation in Soviet Russia.

Sincerely yours,

S/

Arthur S. Flemming
Director

Enclosure

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